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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/796,752	02/06/1997	KOJI ARAI	614.1804/HJS	9335

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EXAMINER

NGUYEN, PHUONGCHAU BA

ART UNIT	PAPER NUMBER
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2665

DATE MAILED: 10/01/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

08/796,752

Applicant(s)

ARAI, KOJI

Examiner

Phuongchau Ba Nguyen

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE 9-16-02.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-5,8,9,11,12,22 and 23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-5,8,9,11 and 12 is/are allowed.
- 6) ☒ Claim(s) 22-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Claim Rejections – 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 22–23 are rejected under 35 U.S.C. 102(b) as being anticipated by Nishimura (5,400,024).

Regarding claim 22:

Nishimura discloses in figure 1 a communication method for a radio LAN system, comprising:

receiving (at the input port of mobile communication exchange station 1 from PSTN or ISDN) an input signal (64 kbps) obtained by time-multiplexing a plurality of signals (11.2 kbps) to be sent to a plurality of terminals;

determining (by mobile communication exchange station 1) a terminal-unit signal to be sent to a corresponding terminal for each of a plurality of time slots of the input signal {col.1, lines 58-60};

time-divisionally dividing (separating) each terminal-unit signal (64 kbps at input port of data multiplexing and separating circuit 21) into first N signals (64 kbps at output ports of data multiplexing and separating circuit 21) within a corresponding time slot;

converting (by audio signal processing apparatus 22a-22m) the first N signals (64 kbps) into second N signals (11.2 kbps) having a transmission-rate lower than that of the first N signals,

providing (by the output ports of the data multiplexing and separating circuit 23) the second N signals (11.2 kbps) separately to a plurality of base stations (3a-3n); and

converting (by data multiplexing and separating circuit 23) each of the second N signals (11.2 kbps) into a plurality of radio signals (output signals from each base station 3a-3n) and transmitting each of the plurality of radio

signals from an antenna (4a) of each of the base stations (3a) to respective terminals (5) {col.2, lines 34–40}.

Regarding claim 23:

Nishimura discloses an apparatus for a radio LAN system, comprising:

a first unit (input port of mobile communication exchange station 1) receiving an input signal (64 kbps from PSTN or ISDN) obtained by time-multiplexing a plurality of signals to be sent to a plurality of terminals;

a second unit (mobile communication exchange station 1) determining a terminal-unit signal to be sent to a corresponding terminal for each of a plurality of time slots of the input signal {col.1, lines 58–60};

a third unit (data multiplexing and separating circuit 21) time-divisionally dividing each terminal-unit signal (64 kbps from PTSN or ISDN) into first N signals (64 kbps) within a corresponding time slot;

a fourth unit (audio signal processing circuit 22) converting the first N signals (64 kbps) into second N signals (11.2 kbps) having a transmission-rate lower than that of the first N signals;

a fifth unit (output ports from data multiplexing and separating circuit 23) providing the second N signals (11.2 kbps) separately to a plurality of base stations (3a-3n); and

a sixth unit (data multiplexing and separating circuit 23) converting each of the second N signals (11.2 kbps) into a plurality of radio signals (11.2 kbps) and transmitting each of the plurality of radio signals (11.2 kbps) from an antenna (i.e., 4a) of each of the base stations (3a-3n) to respective terminals (5){col.2, lines 34-40}.

Claim Rejections – 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Nishimura (5,400,024).

The admitted prior art discloses in figure 1 a plurality of base stations [1–n] connecting to an ATM hub, which is connected to wiring LAN system. These base stations simultaneously transmit data received (input signal) from ATM hub to a terminal station in different frequencies (f_1 – f_n) to a plurality of signals to transmit to a plurality of base stations (fig.1)

The admitted prior art does not explicitly disclose the claimed feature. However, in the same field of endeavor, Nishimura discloses time-divisionally dividing the input signal (64kbps signal) into a plurality of signals (64 kbps signals) at output ports of the data multiplexing and separating circuit 21. Then the divided 64kbps signals being converted into a plurality of 11.2kbps signals by audio signal processing circuit 22. Also, the converted signals 11.2kbps are being multiplexed into a plurality of 11.2 kbps and transmitted to a plurality of base stations ($3a$ – $3n$), which later transmitting the multiplexed 11.2kbps signals to a plurality of terminals (i.e., terminal 5) {also, col.1, line 47 to col.2, lines 40}.

Therefore, it would have been obvious to a skilled artisan to apply Nishimura's teaching into the admitted prior art's system, and the motivation

being to fasten the data transmission by transmitting data at a low bit rate between the base station and mobile stations.

5. Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Iguchi (4,977,558).

The admitted prior art discloses in figure 1 a plurality of base stations [1–n] connecting to an ATM hub, which is connected to wiring LAN system. These base stations simultaneously transmit data received (input signal) from ATM hub to a terminal station in different frequencies (f_1 – f_n) to a plurality of signals to transmit to a plurality of base stations (fig.1)

The admitted prior art does not explicitly disclose the claimed feature. However, in the same field of endeavor, Iguchi discloses a serial/parallel converting means 11 for converting the input multiplexing signal into a parallel signals, and a latch means 16 for demultiplexing signals generates a number of basic signal outputs {fig.4} thus the rate of the basic signal outputs inherently have a lower rate than the basic signal inputs (which are before being demultiplexed by the latch means 16—emphasis added, this is a common

practice). Therefore, it would have been obvious to an artisan to apply Iguchi's teaching into the admitted prior, and the motivation being to fasten the data transmission by transmitting data at a low bit rate between the base station and mobile stations.

Allowable Subject Matter

7. Claims 3-5, 8-9, 11-12 are allowable over prior art of the record.

Response to Arguments

8. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuongchau Ba Nguyen whose telephone number is 703-305-0093. The examiner can normally be reached on Monday-Friday from 10:00 a.m. to 3:00 p.m..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 703-308-6602. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.



Phuongchau Ba Nguyen
Examiner
Art Unit 2665

September 27, 2002

